

**MAT Asphalt, LLC**  
**2055 West Pershing Rd, Chicago, Illinois 60609**

**FUGITIVE DUST CONTROL PROGRAM**

In order to achieve a goal, we are providing the following mandatory program guidelines, to be followed by all plant personnel. This program has been established to coordinate all available means of eliminating or controlling fugitive dust associated with the operation of an asphalt plant.

This plan addresses the regulatory requirements contained in 35 IAC Section 212.301, 212.304 through 212.310, 212.312, and 212.313.

The site layout with normal traffic patterns is included as Attachment 1 to this plan.

All storage piles are less than 260,000 tons and the Facility has applied for a Federally Enforceable State Operating Permit limiting its "Potential-to-Emit" particulate matter to less than 100 tons/year.

The baghouse control for the plant has been tested to demonstrate compliance with PM emission standard of the NSPS for Hot Mix Asphalt Plants (40 CFR 60, Subparts A & I) of 0.04 gr/dscf or less. The material collected by the baghouse is returned to the asphalt plant as part of the mix through enclosed augers.

EXHIBIT 391-2

## PROGRAM OBJECTIVES

The effectiveness of this fugitive dust control program will depend upon the active participation and sincere cooperation of all supervisors and employees, and the coordination of their efforts in carrying out the following basic responsibilities.

- A. Plan and supervise all work to reduce possibilities of fugitive dust from leaving the property.
- B. Maintain a system of prompt detection and elimination of fugitive dust episodes.
- C. Provide for the prevention from fugitive dust impacting adjacent public and private property and all persons.
- D. Establish and conduct an educational program to stimulate and maintain interest and participation of all employees.
- E. This plan will be updated to address any changes to the Facility.

## EXHIBIT 391-2

Wetting is the primary method of dust suppression on site. Wetting is utilized to minimize fugitive dust at least weekly.

### 1. Program Management and Recordkeeping

- a. The plant manager is responsible for ensuring that the plan is followed and updated in response to any change in operation.
- b. Records of dust control measures are recorded by plant personnel, as delegated by the plant manager, on the fugitive dust control log document created by the IEPA.
- c. Records are kept on site, readily available for review, and are maintained for no less than 5 years.

### 2. Summary of Control Practices Utilized During the Operating Season

- a. All paved or unpaved surfaces where material handling is conducted are watered at least once per week and all other paved plant roads and surfaces are cleaned once per week.
- b. Observations are conducted throughout the day. If dust conditions are noted, additional water is applied until the dust is no longer observed.
- c. No watering is required if snow covers the area.

## EXHIBIT 391-2

- d. End Loader access areas around storage piles and bins are watered at least once per week, or more frequently, if dust conditions are observed.
- e. All paved surfaces are cleaned by brooming on a weekly basis by an outside contractor.

### 3. Roads

- a. Plant speed limits are 10 MPH. Signs are prominently displayed.
- b. Speed limits are strictly enforced by plant supervisor and safety patrol.

### 4. Storage Piles, Screens, Conveyors and Transfer Points

- a. Spraying with water at a rate equivalent to 0.1 inch of rainfall per operating day unless,
  - 1. moisture content exceeds 1.5%\*.
  - 2. rainfall of 0.1 inch has occurred within the last 24 hours.
  - 3. the storage pile is frozen.
  - 4. the storage pile is covered with snow.

\*Moisture content is measured and recorded each operating day.
- b. If visible dust at transfer points is observed, water spray is increased until dust is no longer observed.
- c. Material drop heights are minimized to reduce potential dust.

### 5. Storage Bins

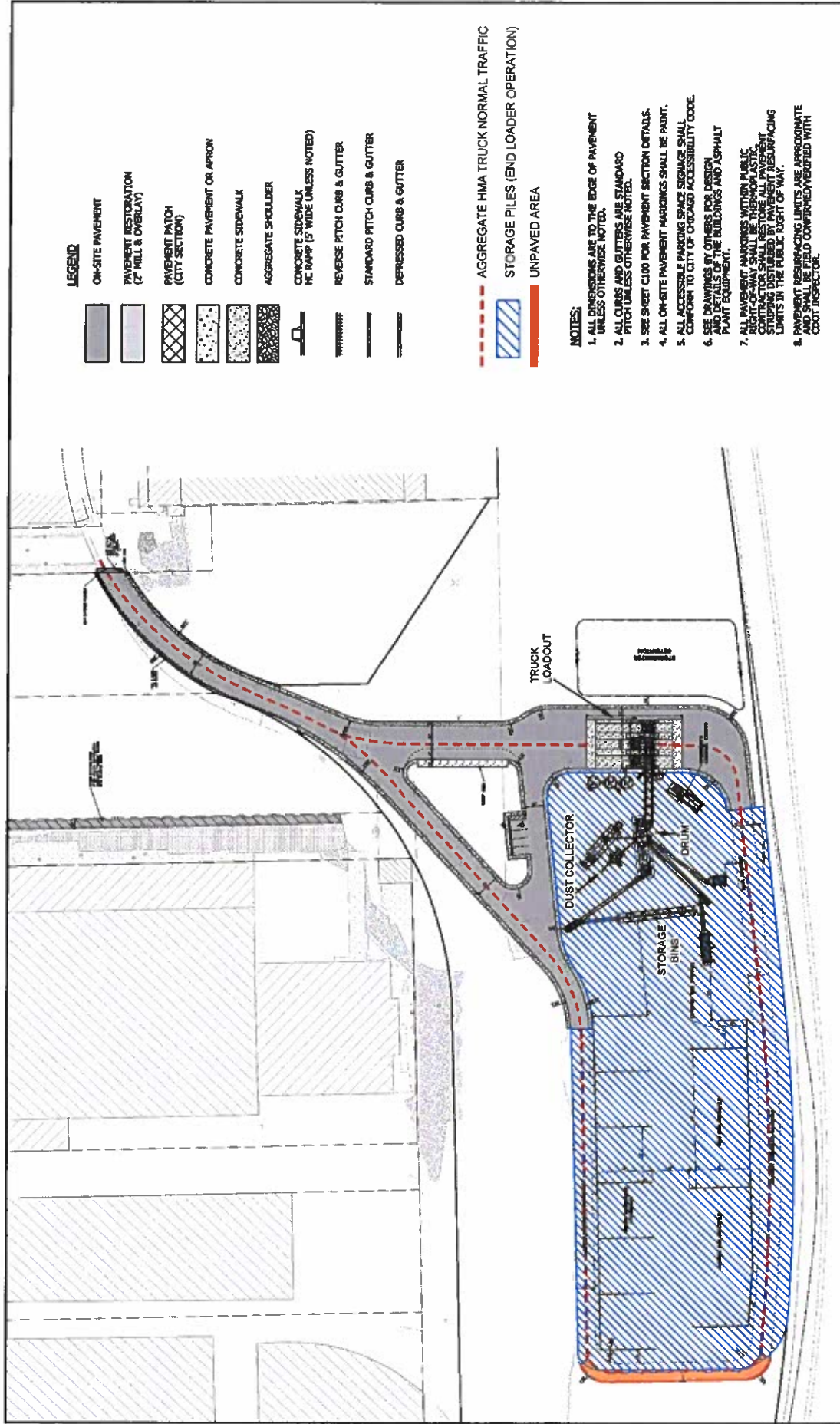
## EXHIBIT 391-2

Storage bins inherently provide control against fugitive dust.

- a. Loader operators are instructed to not overfill bins to eliminate exposure of material to winds.

### 6. Portable Crusher

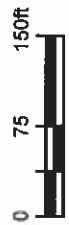
Spray bar and crusher operation are interlocked; the crusher cannot operate without operation of the spray bars.



Source: SPACECO, INC. CONSULTING ENGINEERS

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**MAT ASPHALT CORPORATION**  
2055 W PERSHING ROAD  
CHICAGO, ILLINOIS  
**HOT MIX ASPHALT PLANT CONSTRUCTION**  
**SITE PLAN**



## EXHIBIT 391-2

## IEPA - FUGITIVE DUST CONTROL LOG

[illegible]

Table 1

Summary of Emissions  
Drum Mix Asphalt Plant FESOP Application  
MAT Asphalt, LLC

Emission Source	Throughput				Annual Emission					
					NOx	CO	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOM
	Material	(unit/mo)	(unit/yr)	(unit)	(ton/yr)					
Crush Plant	Aggregate & RAP	55,000	425,000	tons	--	--	5.87	2.05	--	--
Drum	Aggregate	148,333	890,000	tons	24.48	57.85	14.69	10.24	25.81	14.24
Truck Loadout	Asphalt Product	148,333	890,000	tons	--	0.60	0.23	0.23	--	1.85
Silo Filling	Asphalt Product	148,333	890,000	tons	--	0.53	0.26	0.26	--	5.43
AC Storage Tanks	Asphalt Cement	-	10,000,000	gallons	--	--	--	--	--	0.10
Other Tanks	Diesel / Gasoline	-	200,000 / 50,000	gallons	--	--	--	--	--	2.90
Totals:					24.48	58.98	21.04	12.78	25.81	24.52



Table 2

Material Drying Emission Calculations  
 Drum Mix Asphalt Plant FESOP Application  
 MAT Asphalt, LLC

Process Description	Control Device	Material Produced		Emission Factors <sup>[1]</sup>		Emission Rates	
		(ton/mo)	(ton/yr)	Pollutant	(lb/ton)	(lb/hr)	(ton/yr)
Drum	Baghouse with Fabric Filter (PM Only)	148,333	890,000	NOx	0.055	4.08	24.48
				CO	0.13	9.64	57.85
				PM	0.033	2.45	14.69
				PM <sub>10</sub>	0.023	1.71	10.24
				SO <sub>2</sub>	0.0580	4.30	25.81
				VOM	0.032	2.37	14.24

<sup>[1]</sup>Emissions Factors From AP-42, Section 11.1, Hot Mix Asphalt Plants, Tables 11.1-7 and 11.1-8

Table 3

Silo Filling and Truck Loadout Emission Calculations  
 Drum Mix Asphalt Plant FESOP Application  
 MAT Asphalt, LLC

Emission Source	Throughput		Emission Factor <sup>(1)</sup>		Emissions	
	(ton/mo)	(ton/yr)	Pollutant	(lb/ton)	(lb/mo)	(ton/yr)
Silo Filling	148,333	890,000	PM/PM <sub>10</sub>	0.000586	86.92	0.26
			VOM	0.0122	1,809.66	5.43
			CO	0.00118	175.03	0.53
Silo Truck Load-out	148,333	890,000	PM/PM <sub>10</sub>	0.000522	77.43	0.23
			VOM	0.00416	617.07	1.85
			CO	0.00135	200.25	0.60

## Emission Factor Determination

Pollutant	V	T (°F)		Emission Factor <sup>(1)</sup>	
		Load-Out	Filling	Load-Out	Filling
PM	-0.5	325	325	0.000522	0.000586
VOM				0.00416	0.0122
CO				0.00135	0.00118

<sup>(1)</sup>Emission Factors Calculated From AP-42, Section 11.1, Table 11.1-14 (At 325°F these factors match the General FESOP)

Table 4

Crushing Plant Emission Calculations  
Drum Mix Asphalt Plant FESOP Application  
MAT Asphalt, LLC

Emission Source	Maximum Number of Units	Throughput		Pollutant	Emission Factor <sup>(1)</sup>		Emissions	
					Uncontrolled	Controlled <sup>(2)</sup>		
		(ton/mo)	(ton/yr)		(lb/ton)		(ton/mo)	(ton/yr)
Crushers	3	55,000	425,000	PM	0.0012	0.0012	0.10	0.77
				PM <sub>10</sub>	0.00054	0.00054	0.04	0.34
Screens	9	55,000	425,000	PM	0.025	0.0022	0.54	4.21
				PM <sub>10</sub>	0.0087	0.00074	0.18	1.42
Conveyors	30	55,000	425,000	PM	0.0030	0.00014	0.12	0.89
				PM <sub>10</sub>	0.0011	0.000046	0.04	0.29

<sup>(1)</sup>Emission Factor Calculated From AP-42, Section 11.19-2, Table 11.19.2-2.

<sup>(2)</sup>Control through moisture content

Table 5

Storage Tank Emission Summary  
Drum Mix Asphalt Plant FESOP Application  
MAT Asphalt, LLC

Emission Unit	Capacity	Throughput	VOM Emissions <sup>[1]</sup>			Percentage of VOM that is also HAP <sup>[2]</sup>	HAP Emissions
			Working Loss	Breathing Loss	Total		
	(gal)	(gal/yr)	(lb/yr)	(lb/yr)	(ton/yr)	(%)	(ton/yr)
Asphalt Cement Tanks	30,000	10,000,000	193.35	7.60	0.10	1.3%	1.31E-03

<sup>[1]</sup>TANK 4.0 Emission Reports.

<sup>[2]</sup>Emission factor (% of VOM) for HAP from AP-42 Section 11.1, Table 11.1-16 (Storage Tank) (0.69% Formaldehyde is Single Largest HAP).

Vapor Pressure Calculation for TANKS 4.0.9d Input (Antoine's Equation)

Average Temperature (T) = 325                      435.93 K

A = 75,350.06    B = 9.00346    (AP-42 Page 11.1-9)

$$\log_{10} P = \frac{-0.05223 * A}{T} + B = -0.0244$$

Density of Asphaltic Cement (lb/gal) =                      9.17

P<sub>325F</sub> =                      0.0183 psia

P<sub>275F</sub> =                      0.0044 psia

P<sub>350F</sub> =                      0.0347 psia

P<sub>ave</sub> =                      0.9453 mmHg

0.01828 psia